

# Research on the Current Situation and Improvement Path of Observation Skills of Early Childhood Teachers in Constructive Games——Based on the research in Guizhou Province

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**Abstract:** The focus on young children's deep learning in play in the context of the educational reform of play curricularization has posed new challenges to the play observation ability of early childhood teachers. Teachers are required to provide support based on observation and young children's experiences, propose guidance that is beneficial to young children's individualized development, and support young children's learning and development in play. Therefore, improving early childhood teachers' play observation ability has become a hot topic in current research and practice in early childhood education. Based on the current research on the observation ability of early childhood teachers in Guizhou Province, this study finds that the level of the school, kindergarten teaching and research, teachers' education and professional theory are all important factors affecting the observation ability of early childhood teachers in play, and proposes ways to improve the observation ability of early childhood teachers from the three levels of education administration, kindergarten management, and teachers themselves.

**Keywords:** constructive play, early childhood teachers, observation skills

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## Introduction

Under the background of the educational reform of game curriculumization, it puts forward higher requirements for the observation ability of early childhood teachers, and improves the game observation ability of early childhood teachers in order to keep up with the changes brought about by the construction of the game curriculumization, because the game is unpredictable, which requires higher observation ability of teachers, and the prerequisite for teachers to observe and correctly interpret the behaviors of young children is to observe young children scientifically<sup>[1]</sup>. While constructive play is a kind of creative play, children's constructive play is accompanied by role play, there are more children's representational behaviors, there is more interaction and cooperation between children, and children's constructive skills are more explicit. Therefore, observation cases of constructive play are often used as analysis materials for the development of observation skills of early childhood teachers. This study investigated the observation ability of early childhood teachers in Guizhou Province based on teachers' observations in constructive play.

## **1. Subjects and methodology of the study**

### **1.1 Subject of the study**

In order to understand the basic situation of the play observation ability of early childhood teachers in Guizhou Province, 1,080 early childhood teachers were selected by random sampling from Zunyi City, Guiyang City, Bijie City, Qiannan Prefecture, and Tongren City to conduct a questionnaire survey, and 1,036 valid questionnaires were retrieved, with a recovery rate of 96%. The basic situation of kindergarten teachers: (1) gender: 1,022 female teachers and 14 male teachers; (2) age: 409 under 25 years old, 497 between 26 and 35 years old, 107 between 36 and 45 years old, and 23 above 45 years old; (3) teaching experience: 700 between 1 and 5 years old, 264 between 6 and 10 years old, 44 between 11 and 15 years old and 44 between 11 and 15 years old; (4) age of teaching: 700 between 1 and 5 years old, 264 between 6 and 10 years old, and 44 between 11 and 15 years old. There are 44 people with 44 years of teaching experience, 15 people with 16 to 20 years of teaching experience, and 13 people with more than 20 years of teaching experience; (4) education: 253 people with secondary education, 403 people with college education, 376 people with bachelor's degree, and 4 people with postgraduate education;(5) In terms of titles: 787 not yet graded, 153 kindergarten teachers of the first grade, 88 kindergarten teachers of the intermediate grade, and 8 kindergarten teachers of the senior grade; (6) In terms of kindergarten grades: 478 ungraded kindergarten teachers, 216 teachers of model kindergartens at the county and district levels, 250 teachers of model kindergartens at the municipal level, and 92 teachers of model kindergartens at the provincial level; (7) In terms of nature of kindergarten grades: 472 teachers of public kindergartens, and 564 teachers of private kindergartens; and (8) In terms of class grades: 287 teachers of small classes, 331 teachers of intermediate classes, and 418 teachers of large classes.

### **1.2 Research methodology**

This study mainly used the questionnaire and interview methods. The questionnaire of this study mainly drew on Wu Yaying's questionnaire on the observation ability of early childhood teachers, and prepared a questionnaire for the survey of the observation ability of early childhood teachers' constructive games in Guizhou Province, which was measured through a total of 37 measurement items, and the Cronbach's Alpha of the overall questionnaire was 0.954, and the questionnaire scale used in this study had a good level of reliability with a good structure of reliability. The questionnaire was scored on a five-point scale and the statistical software SPSS.21 was used for data processing. At the same time, this study also developed an interview outline to gain insights into the observation ability and influencing factors of early childhood teachers' constructive play, using semi-structured interviews with 30 randomly selected teachers from the surveyed early childhood teachers to analyze the reasons for the differences in the level of observation ability of early childhood teachers' constructive play.

## **2. Findings and analysis**

### **2.1 The current situation of observation skills of early childhood teachers in constructive play in Guizhou Province**

#### **2.1.1 The overall level of observation skills of early childhood teachers in constructive play is low**

This study examined the observation ability of early childhood teachers in constructive play in four aspects: determining observation goals, applying observation methods, conducting observation records and

analyzing observation results. Through data processing and analysis of the returned questionnaires, it was found that the total mean value of observation ability in constructive games of early childhood teachers was 3.923 (out of 5), which was lower than the median value of 4, indicating that the overall level of observation ability in constructive games of early childhood teachers in Guizhou Province was at a low level. The mean value of the dimension of determining observation goals is 4.118, the mean value of the dimension of applying observation methods is 3.963, the mean value of the dimension of conducting observation records is 3.877, and the mean value of the dimension of analyzing observation results is 3.762. It can be seen that the scores of the dimension of determining observation goals are higher than 4, and the scores of the dimensions of applying observation methods, conducting observation records, and analyzing observation results are lower than 4, which indicates that early childhood teachers have the idea of determining observation goals and conducting observations, but their ability to use observation methods to record and analyze the results of the record is insufficient, and the overall level of observation ability is low.

### **2.1.2 Observations were aware of the observation points of the game, but there was little awareness of developing and implementing an observation plan**

According to the data of the dimension of “Determining Observation Objectives”, early childhood teachers are able to distinguish the observation points of the game activities in the observation of constructive games, for example, in the option of “In constructive games, I will observe children’s purpose of construction, social interaction, role-playing behavior, interactive behavior, and construction skills”, the mean score is close to the average value of 4.118, and the scores are 4.12, 4.11, 4.22, 4.31, and 4.23, respectively. For example, in the option In the constructive play, I will observe the children’s purpose of construction, social interaction, role-playing behavior, interactive behavior, constructive skills, the mean value of the scores is close to the average value of 4.118, and the scores of each item are 4.12, 4.11, 4.22, 4.31, 4.23, which shows that the teachers' sense of observation is strong, and that they know the main points of observation that they should grasp in the process. However, the scores of 3.99 for “I will set observation objectives before observation” and 4.00 for “I will make an observation plan before observation” are lower than the mean value of 4.118. The author interviewed several kindergarten directors. “We had a year of continuous observation teaching and research, and the teachers could only call it watching games at first, but only later could they call it observing games, because game observation requires a lot of theory and methodology from the teachers, and especially the formulation of observation goals and plans requires the teachers to master the observation methodology. This is difficult for me. Of course, in the actual process of carrying out game observation, because the teacher has to take into account the safety of the children, and may have done a good observation plan for the day, it will be interrupted by other children seeking help or safety factors that interrupt the teacher’s observation, so it is difficult to determine a good goal and plan to actually be carried out, and people make less observation goals and plans before observation.” Through the interview data, it was found that the teachers thought that conducting play observation required a high level of teacher theory and observation methodology, and that the observation goals and plans made before the observation were easily interrupted by various factors during the actual observation, so the teachers preferred random on-site observation and reduced their awareness of making goals and plans before the observation.

### **2.1.3 Insufficient use and mastery of observation methods**

By comparing the mean value of teachers’ ability to use observation methods with the differences between individual behaviors, the mean value of kindergarten teachers’ ability to use observation methods

in Guizhou Province is 3.963, with all scores below 4, indicating that kindergarten teachers' ability to use observation methods is not high. Among them, the scores of teachers' "often observe children's constructive play with the help of cell phones, cameras, tape recorders and other equipment" and "I can choose suitable observation methods according to the content of observation" are close to 4.0, which tends to be more in line with the statement. The score of "I don't know which method to choose" is 3.8, which is lower than the mean value, indicating that teachers have the awareness of using observation tools and selecting observation methods according to the content of the observation, but the application and mastery of observation methods are insufficient.

#### **2.1.4 Observations were not comprehensive enough and the game was not observed in sufficient depth**

The scores for each component of the observation records were as follows: (1) the mean score for the item "mainly describing the children's language and actions" was 3.93; (2) the mean score for the item "recording the children's emotional and affective experiences in constructive play" was 3.97; (3) The mean score for the item "Recording behaviors related to children's social interaction skills during play" was 3.89; (4) The mean score for the item "Recording behaviors related to children's constructive skills" was 3.87; and (5) The mean value of the item "Recording how children represent constructive materials" is 3.81. Obviously, all the items are lower than the median value of 4.0, among which the item "Recording how children represent constructive materials" has the lowest score and is lower than the mean value. It can be seen that teachers pay more attention to children's language and movement, emotional experience and social interaction skills in games, and less attention to children's constructive skills and representational behaviors in constructive games. Through in-depth observation and analysis of the kindergarten frontline, the author believes that teachers pay more attention to children's language and movement, emotional-experience and social interaction skills in play is related to the professional level of teachers, and that children's language and movement, emotional-experience and social interaction in play can timely react to whether conflict occurs in children's play, from which the author believes that teachers pay more attention to whether conflict occurs in children's play, and neglect to pay attention to children's constructive skills and representational behaviors in constructive play. Thus, the author believes that teachers are more concerned about whether conflict occurs in the children's play and neglect to observe the constructive skills and representational behaviors in the children's play, which indicates that the depth of teachers' observation of the children's play is not deep enough and that the teachers' own level of play theory is not high.

#### **2.1.5 Inadequate ability to record and analyse scientifically and lack of knowledge of game theory**

Of the 1,036 teachers in this study, only 56 teachers knew the theoretical features of constructive game theory very well, and 356 knew them relatively well, i.e., 39.7% of the teachers were relatively familiar with the theoretical knowledge of constructive game theory, which shows that most of the teachers were unfamiliar with game theory.

By comparing the mean value of the ability to record observations with the differences in individual behaviors, teachers' ability to analyze the observation results of constructive play was weak overall, with the score of the item of analyzing the constructive play behaviors of young children in relation to the relevant theoretical knowledge of the analysis as low as 3.47, the score of the item of analyzing by virtue of the teacher's experience as 3.81, and the score of the item of analyzing the results of the observation in

relation to the game theory that is beneficial to young children's development as a guideline. The score for the item of analyzing the observation results was 3.9, and the mean value of the ability to analyze the observation results was 3.76. It can be seen that the teachers analyzed the results more with their own experience, and even though they had the awareness of analyzing the results with the play theories afterward, it was difficult for them to analyze the results with the related theoretical knowledge when analyzing the results, which means that the teachers had a weak foundation of professional theories, and their level of applying the professional theories was low. Among the individual behaviors, the scores of analyzing the social behavior, representational behavior, constructive skill level, and mathematical cognition items in children's games were 3.75, which was lower than the mean value of 3.76, which shows that the teachers analyzed the purposefulness of the analysis and the scientificity of the results of the analysis was insufficient. The author conducted a one-sample t-test between each item of analyzing and observing ability and the total mean of analyzing and observing ability, and found that the p-value of the item of teachers' "analyzing children's performance in the context of the game theory related to constructive games" was 0.00 ( $p < 0.05$ ), which was significantly correlated, so that the objectivity of teachers' analyzing and observing results was not high enough to reduce teachers' analyzing and observing results. Therefore, teachers' objectivity and truthfulness in analyzing observations will decrease the level of teachers' ability to analyze observations.

## **2.2 Analysis of factors affecting the observation ability of early childhood teachers' constructive play in Guizhou Province**

In order to provide a comprehensive understanding of the factors affecting the differences in the level of observational skills of early childhood teachers in constructive play, the author analyzed the differences in the nature of the teacher's school, the level of the school, the status of the school's teaching and research, the individual's academic qualifications, the time spent on professional learning and the mastery of the characteristics of the game.

### **2.2.1 The grade of the school in which they are located is an important factor in the overall observational skills of teachers**

Kindergarten grade refers to the grade recognized by the top-down demonstration assessment carried out according to the "Kindergarten Grade Evaluation Methods" of the province or city in which it is located, and it is divided into provincial, municipal, county (district) demonstration kindergartens and ungraded kindergartens. According to the analysis, there was a significant difference in the total mean value of constructive play observation ability of teachers in kindergartens of different demonstration grades ( $P=0.00$ ). The higher the demonstration grade of the teacher's kindergarten, the higher the mean scores of the four competencies of teacher observation, in which the competencies of teachers of provincial demonstration kindergartens in determining observation goals, applying observation methods, and conducting observation records were significantly higher than those of teachers of municipal demonstration kindergartens, and the difference in the mean values of the competencies of analyzing the results of observation was not too great between the teachers of the provincial demonstration kindergartens and those of the municipal demonstration kindergartens. Combined with the assessment of provincial model kindergartens in Guizhou Province, it is understood that since most provincial model kindergartens are in the urban areas of municipalities or counties, they have certain geographical advantages, teachers have more opportunities to receive learning and training, new teachers have a higher starting point for their academic qualifications, and a high percentage of teachers are in the establishment, so that the professional

quality of the teacher team as a whole is high. At the same time, provincial model kindergartens have relatively complete facilities and equipment, reasonable teacher-child ratios, and scientific teaching management systems that lay the foundation for teachers to carry out play observation. Therefore, the demonstration level of kindergartens influences the difference of kindergarten teachers' overall play observation ability in many ways.

### **2.2.2 The frequency of play-based teaching and research in the organization had a significant effect on teachers' ability to set observation goals and use observation methods**

The conduct of kindergarten teaching and research is closely related to the professional development of teachers. Kindergarten teaching and research means that kindergarten teachers carry out research around specific problems in teaching practice, in order to promote teachers' professional development and achieve the purpose of improving teaching quality. Carrying out teaching and research based on games is conducive to teachers' understanding of the important value of games for young children's learning and development, discovering the problems of young children in games, and improving teachers' observation and analysis of games. The situation of teaching and research in the author's school will have an impact on teachers' observation ability, as confirmed by one-way ANOVA, the more frequently the teacher's school carries out game-based teaching and research, the higher the score of the teacher's ability to determine the observation goal and to use the observation method, of which the greater the difference in the ability to determine the observation goal.

### **2.2.3 Teachers' qualifications have a significant effect on the ability to analyze observations**

Higher academic qualifications represent teachers' more solid professional knowledge, more knowledge of observation methods, better ability to express and record words, more accurate selection of observation methods, more complete recording of observation information, and the ability to accurately analyze the observation results in combination with professional theories and ultimately make appropriate support and guidance. In particular, there was a significant difference in the ability to analyze observation results among the highest academic qualifications obtained by teachers ( $P=0.002$ ). Through the comparative observation of kindergarten play scene, the author found that the lower the education level, the lower the teachers' awareness of young children's play observation, they could not capture the effective information well during the observation process, and it was more difficult to incorporate the theory of play observation in the analysis of play observation.

### **2.2.4 teachers' mastery of game theory had a significant effect on all four of the teacher competencies**

Early childhood teachers' mastery of game theory has a close influence on their game observation ability. Comparing the mastery of game theory with each variable through one-way ANOVA, it was found that early childhood teachers' mastery of game theory was significantly different in the four competencies of determining the observation goal, applying the observation method, recording the observation, and analyzing the observation results ( $P<0.05$ ). A teacher who mastered the theory of constructive play was more clear about the purpose and content of observation when observing young children's constructive play, was able to differentiate the focus of constructive play observation, chose the recording method in a targeted way, thought about children's constructive skills and levels in the process of observing and

recording, and looked for supportive strategies in a timely manner in light of the problems that emerged in young children.

Writer: How do you think a grasp of constructed play theory has influenced your observations of young children's constructed play?

Teacher C: When observing middle school children's construction play, the teacher first learned about the children's level of construction and the construction skills they had mastered at that age, and when observing the children's play, she was able to know which construction skills they had mastered and which ones they didn't know, and then she knew how to pull up the children's skills in the next step.

### **2.3 Paths to improve the observation skills of early childhood teachers in constructive play**

Based on the research data and combining with the actual situation of kindergarten teachers, the author summarizes the paths to improve the observation ability of kindergarten teachers' constructive games as follows.

#### **2.3.1 Administrative aspects of education**

First, education administrations should give full play to the guiding role of management and promote the professional development of early childhood teachers through a variety of assessments. For example, in the quality of teaching and learning section of the evaluation of kindergartens in Guizhou Province, Teachers support children's active and creative play and guide children's learning and development in play." Teachers' observation of children's play and guiding their learning and development were emphasized. Evaluators will analyze the kindergarten's observation data and records, and go into the classroom to observe how teachers observe, analyze, and guide children's play. In this way, they will provide suggestions for kindergarten curriculum construction and care education, and supervise the practice of effective education, which must begin with reading and understanding children's developmental needs, and which must begin with improving observation skills and launching scientific observation.<sup>[2]</sup>

Secondly, the starting point for upgrading the qualifications of kindergarten teachers. China's early childhood teacher qualification certificate entry requirements for the starting point with early childhood teacher training school graduation and above, that is, early childhood teacher training related majors in the secondary school education instantly apply for early childhood teacher qualification certificate, so that early childhood teachers starting qualifications are lower, teacher professionalism is uneven. The author, as a college preschool education teacher and kindergarten administrator, through long-term observation of teachers in kindergartens and text data checking and analysis, found that the difference in academic qualifications is particularly obvious in the observation text data submitted by the teachers, and that teachers with higher academic qualifications are more careful in observing and recording young children's games in independent games, and the recording text is more scientific and objective, and more capable of combining with the theory of the game to analyze and guide young children's games. They were more able to analyze and guide the children's play in the light of game theory.

#### **2.3.2 Kindergarten management**

First, training and teaching and research to improve teachers' play theory and observation skills. The lack of game observation theory knowledge and observation strategy of early childhood teachers is an important factor of the weak game observation ability of kindergarten teachers,<sup>[3]</sup> most of the early childhood teachers' game observation theory knowledge and observation strategy is very weak, although the cultivation process of early childhood education teacher trainees has opened the game observation

course, but the cultivation of game observation ability must be the combination of game observation theory and the examples of young children's games. Therefore, kindergartens can organize training to strengthen the theoretical knowledge of game observation for early childhood teachers and carry out teaching and research on game observation case studies to help teachers apply game observation theory in practice, use observation tools, and select appropriate observation angles and valuable information.

Second, exerting curriculum leadership and emphasizing play observation as part of curriculum implementation. Kindergarten curriculum is the process of young children obtaining beneficial experience<sup>[4]</sup>, game observation as an important part of kindergarten curriculum implementation, the results of game observation provide reference for curriculum implementation, but also for kindergartens to formulate curriculum plans. The kindergarten management level should give full play to the leadership of the curriculum, focus on game observation as a specific process of curriculum implementation, and refine the path of curriculum implementation, such as, observation and understanding of each child as the main points of kindergarten conservation management, and pay attention to the teacher's advancement of young children's development and curriculum improvement based on observation. Exemplary cases of how kindergarten teachers combine observation with curriculum implementation are shared to create an atmosphere that emphasizes observation and inspires teachers to pay attention to observation.

### **2.3.3 Individual teachers**

First, comprehend the value of game observation and strengthen their own observation awareness. The most effective way for the professional development of early childhood teachers is for them to self-reflect and improve through learning. To improve the observation ability of early childhood teachers, the first thing they should do is to understand the important value of game observation, and only through conscious observation is it possible to truly understand each child<sup>[5]</sup>, so as to promote the physical and mental development of young children based on observation and support of the game and to improve their own professional development in the observation and reflection. Only when teachers realize the importance of play observation and have the responsibility to do a good job of effective play support based on observation can they observe children's play in detail and take the initiative to learn observation methods and strategies.

Secondly, study the game theory diligently and improve the level of analysis by combining with practical cases. When early childhood teachers have a certain sense of observation, the prerequisite to do game observation is to master professional observation theory, and good game observation and analysis also need to strengthen the game theory and combine it with practical exercises of cases. Therefore, on the basis of familiarizing themselves with observation theory, early childhood teachers should implement more on-site observation, collect observation data, analyze observation data, write observation records, and consult the information in time for the problems at the end of the observation, as well as verify whether the preliminary observation and analysis are comprehensive and scientific. Through repeated practice exercises and data review, they can solidify the theoretical foundation and effectively improve their own level of game observation.

## **3. Conclusion**

In summary, based on the current level of the overall low game observation ability of early childhood teachers in Guizhou Province, the game curriculum-based education poses a new challenge to the professional level of early childhood teachers. While the game observation ability of early childhood teachers needs to be gradually improved in the course of curriculum implementation, the author believes that in order to pry the development of early childhood teachers' professional ability by curriculum



implementation, both game curricularisation and curriculum gamification should exist in the kindergarten education ecology.

### **Conflicts of interest**

The author declares no conflicts of interest regarding the publication of this paper.

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